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# (12) United States Patent

Gurol et al.

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## (54) METHOD AND COMPOSITION FOR TREATING GASTRO-ESOPHAGEAL DISORDERS

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# Related U.S. Application Data

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(52) **U.S. Cl.** 

(58) Field of Classification Search

None

See application file for complete search history.

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## (57) ABSTRACT

An orally administered composition that includes least one alkaline agent with a pH of at least 9.0 to 12.0, mixed in an aqueous vehicle with relatively high surface tension, high viscosity and lateral adhesion properties. When mixed, a low water soluble emulsion is formed that evenly coats and partially adheres to the lower section of the esophagus and the LES and forms a relatively long acting, protective barrier and partially neutralizes gastric acid. In one embodiment, the alkaline agent is potassium hydroxide and the aqueous vehicle is made of hydroxypropyl methyl cellulose, polyethylene glycol or ethylene glycol and additional thickener agents capable of withstanding high pH environments, such as xanthan gum, croscarmellose sodium, and microcrystalline cellulose. Additional organoleptic agents, such as gum Arabic and polyethylene glycol, flavorings, such as sodium chloride, acesulfame potassium, sodium saccharine, and mint, and stabilizers such as colloidal silica made be added.

### 17 Claims, 3 Drawing Sheets

